

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~striketrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (ORIGINAL), or (not entered).

Please amend claims 24, 27, 34 and 36 and cancel claims 25, 26 and 35 without prejudice or disclaimer of the subject matter recited therein, in accordance with the following:

1-23 (CANCELLED)

24. (CURRENTLY AMENDED) A digital broadcasting system comprising:
a digital broadcasting transmitter encoding a data stream including stuff bytes at a certain location, modulating, RC-converting and transmitting the encoded data stream having known data; and

a digital broadcasting receiver receiving the encoded data stream, demodulating the encoded data stream into a baseband signal, and equalizing the demodulated signal using the detected known data,

the digital broadcasting transmitter including:

_____ a randomizer receiving and randomizing the data stream including stuff bytes at the certain location,

_____ a sequence provider generating the known data having a particular sequence to replace the stuff bytes,

_____ a stuff byte replacer inserting the known data at the location of the randomized data stream where the stuff bytes are inserted,

_____ an encoder encoding the data stream output from the stuff byte replacer for error-correction, and

_____ a transmission part modulating, RF-converting and transmitting the encoded data stream,

the encoder including:

an RS encoder adding a parity of certain bytes to correct errors
generated by channels,

an interleaver interleaving the data added with the parity in a certain
pattern, and

a trellis encoder trellis-encoding the interleaved data,

wherein the encoder replaces the parity added by the RS encoder with newly
generated parity for the know data altered according to an initialization of the trellis
encoder.

25. (CANCELLED)

26. (CANCELLED)

27. (CURRENTLY AMENDED) The digital broadcasting system of ~~claim~~
~~26~~claim 24, wherein the trellis encoder includes a memory element for trellis encoding
operation and initializes the memory element from the location inserted with the known
data for trellis-encoding.

28. (PREVIOUSLY PRESENTED) The digital broadcasting system of claim 27,
further including a packet buffer for receiving and temporarily storing the data stream from
the RS encoder.

29. (PREVIOUSLY PRESENTED) The digital broadcasting system of claim 28,
wherein the packet buffer receives the data altered according to the initialization of the
memory element from the trellis encoder and updates the stored data.

30. (PREVIOUSLY PRESENTED) The digital broadcasting system of claim 29,
further including a RS re-encoder & replace parity for RS-encoding the updated data input
from the packet buffer, generating the altered parity, outputting the parity to the trellis
encoder and replacing the parity added by the RS encoder.

31. (PREVIOUSLY PRESENTED) The digital broadcasting system of claim 24, wherein the interleaver outputs known data inserted at the same location of a plurality of different data streams output from the RS encoder in continuous data streams.

32. (PREVIOUSLY PRESENTED) The digital broadcasting system of claim 24, wherein the transmission part modulates the data in VSB modulation.

33. (PREVIOUSLY PRESENTED) The digital broadcasting system of claim 24, wherein the digital broadcasting receiver includes:

a demodulator inserting known data of a predefined particular sequence at a location in the data stream including stuff bytes, receiving an encoded signal from the digital broadcasting transmitter and demodulating the signal into the baseband signal;

a known data detector detecting the known data from the demodulated signal; and
an equalizer equalizing the demodulated signal using the detected known data.

34. (CURRENTLY AMENDED) A signal processing method of a digital broadcasting system comprising:

encoding a data stream including stuff bytes at a certain location, modulating, RC-converting and transmitting the encoded data stream; and

receiving the encoded data stream, demodulating the encoded data stream into a baseband signal, detecting the known data from the demodulated signal, and equalizing the demodulated signal using the detected known data,

wherein the encoding of the data stream includes:

adding parity of certain bytes to correct errors generated by channels by RS encoding,

interleaving the data added with the parity in a certain pattern,

trellis-encoding the interleaved data, and

replacing the parity added by the RS encoding with newly generated parity for the known data altered according to an initialization of the trellis-encoding.

35. (CANCELLED)

36. (CURRENTLY AMENDED) The method of ~~claim 35~~claim 34, wherein the trellis encoding initializes the memory element at the location where the known data is inserted for a predetermined memory element used for trellis encoding so that the trellis encoding is performed.

37. (PREVIOUSLY PRESENTED) The method of claim 36, further including:
receiving and temporarily storing the data stream generated in the RS encoding,
receiving the data altered according to the initialization of the memory element from the trellis encoding, and performing a update.

38. (PREVIOUSLY PRESENTED) The method of claim 37, further including:
RS encoding the encoded data, generating an altered parity, returning to the trellis encoding, replacing and adding the parity added in the RS encoding, and performing trellis encoding.